

1   **ABSTRACT OF THE DISCLOSURE**

2         A reflective optical apparatus for a free-space optical communication  
3         system includes a housing, an optical transceiver, a reflective member and the  
4         protective window. The housing has a front opening. The reflective member is  
5         mounted in the housing and has a reflective surface with a focal point, which  
6         faces the front opening. The optical transceiver is mounted at the focal point of  
7         the reflective surface. The protective window is mounted in the housing between  
8         the transceiver and the front opening of the housing. Consequently, the reflective  
9         member can be made of machinable materials, such as composite materials and  
10        can be machined precisely to form the reflective surface with an exact curvature  
11        and smooth surface. The materials and sizes of the reflective member are not  
12        restricted, and the objectives of being low cost and easy to machine in fabrication  
13        for the reflective optic apparatus are accomplished.